

State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF AIR QUALITY

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Title V Operating Permit

PERMIT NUMBER: 300002001

DATE OF PERMIT: September 19, 2000

Date of Last Revision: October 23, 2001

This Operating Permit is issued to, and applies to the following:

Name of Permittee:

Nucor Steel
PO Box 100
Plymouth, UT 84330

Permitted Location:

Nucor Steel
West Nucor Rd
PO Box 100
Plymouth, UT 84330

UTM coordinates: 4,637,500 meters Northing, 401,000 meters Easting

SIC code: 3312

ABSTRACT

Nucor Steel is an Electric Arc Furnace (EAF) shop, commonly known as a minimill. The facility is a recycling center which utilizes scrap steel as a raw feedstock. Scrap steel is purchased from a number of sources and sorted. The steel is loaded into charge buckets and transported to one of two EAFs. Oxyfuel burners and electricity are used to melt the steel into a liquid form. Alloys are added until the desired metallurgy is achieved. The molten material is then continuously molded and cut into billets for stockpiling. The billets are then reheated and transferred to the rolling mill to be shaped and shipped to the customer. Nucor is subject to 40 CFR Subpart AA, Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and on or before August 17, 1983. Nucor is a major source of sulfur dioxide, oxides of nitrogen, PM₁₀, and carbon monoxide.

UTAH AIR QUALITY BOARD

By:

Prepared By:

Richard W. Sprott, Executive Secretary

Tim Andrus

Operating Permit History

9/19/00 - Permit issued	Action initiated by an initial operating permit application	
10/23/01 -Permit modified	Action initiated by an administrative amendment (initiated by source)	To incorporate new and modified requirements from DAQE-787-01. The changes are detailed in an engineering review comment in this permit.

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Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

Section I: GENERAL PROVISIONS

I.A. Federal Enforcement.

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

I.B. Permitted Activity(ies).

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

I.C. Duty to Comply.

I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))

I.C.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (R307-415-6a(6)(b))

I.C.3 The permittee shall furnish to the Executive Secretary, within a reasonable time, any information that the Executive Secretary may request in writing to determine whether cause exists for

modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Executive Secretary copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(e))

- I.C.4 This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance shall not stay any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

I.D. Permit Expiration and Renewal.

- I.D.1 **This permit is issued for a fixed term of five years and expires on September 19, 2005.** (R307-415-6a(2))
- I.D.2 Application for renewal of this permit is due by March 19, 2005. An application may be submitted early for any reason. (R307-415-5a(1)(c))
- I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))
- I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

I.E. Application Shield.

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Executive Secretary takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Executive Secretary any additional information identified as being needed to process the application. (R307-415-7b(2))

I.F. Severability.

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

I.G. Permit Fee.

I.G.1 The permittee shall pay an annual emission fee to the Executive Secretary consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

I.H. **No Property Rights.**

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

I.I. **Revision Exception.**

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (R307-415-6a(8))

I.J. **Inspection and Entry.**

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Executive Secretary or an authorized representative to perform any of the following:

I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))

I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))

I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))

I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

I.K. **Certification.**

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

I.L. Compliance Certification.

- I.L.1 Permittee shall submit to the Executive Secretary an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than January 28, 2001 and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))
- I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;
- I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;
- I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in Provision I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and
- I.L.1.d Such other facts as the Executive Secretary may require to determine the compliance status.
- I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Executive Secretary: (R307-415-6c(5)(d))

Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
EPA, Region VIII
999 18th Street, Suite 300
Denver, CO 80202-2466

I.M. Permit Shield.

- I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:
- I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))

- I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))
- I.M.2 Nothing in this permit shall alter or affect any of the following:
- I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))
- I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(g) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b))
- I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))
- I.M.2.d The ability of the Executive Secretary to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))
- I.N. **Emergency Provision.**
- I.N.1 An “emergency” is any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. (R307-415-6g(1))
- I.N.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the affirmative defense is demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
- I.N.2.a An emergency occurred and the permittee can identify the causes of the emergency. (R307-415-6g(3)(a))
- I.N.2.b The permitted facility was at the time being properly operated. (R307-415-6g(3)(b))
- I.N.2.c During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit. (R307-415-6g(3)(c))
- I.N.2.d The permittee submitted notice of the emergency to the Executive Secretary within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate

emissions, and corrective actions taken. This notice fulfills the requirement of Provision I.S.2.c below. (R307-415-6g(3)(d))

I.N.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. (R307-415-6g(4))

I.N.4 This emergency provision is in addition to any emergency or upset provision contained in any other section of this permit. (R307-415-6g(5))

I.O. **Operational Flexibility.**

Operational flexibility is governed by R307-415-7d(1).

I.P. **Off-permit Changes.**

Off-permit changes are governed by R307-415-7d(2).

I.Q. **Administrative Permit Amendments.**

Administrative permit amendments are governed by R307-415-7e.

I.R. **Permit Modifications.**

Permit modifications are governed by R307-415-7f.

I.S. **Records and Reporting.**

I.S.1 Records.

I.S.1.a The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii))

I.S.1.b For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1 The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2 The date analyses were performed.

I.S.1.b.3 The company or entity that performed the analyses.

I.S.1.b.4 The analytical techniques or methods used.

- I.S.1.b.5 The results of such analyses.
- I.S.1.b.6 The operating conditions as existing at the time of sampling or measurement.
- I.S.1.c Additional record keeping requirements, if any, are described in Section II, Special Provisions.
- I.S.2 Reports.
- I.S.2.a Monitoring reports shall be submitted to the Executive Secretary every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))
- I.S.2.b All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i))
- I.S.2.c The Executive Secretary shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. **Prompt, as used in this condition, shall be defined as written notification within 10 days.** Deviations from permit requirements due to unavoidable breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))
- I.S.3 Notification Addresses.
- I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Executive Secretary are to be sent to the following address or to such other address as may be required by the Executive Secretary:
- Utah Division of Air Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820
Phone: 801-536-4000

- I.S.3.b All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Executive Secretary:

For annual compliance certifications

Environmental Protection Agency, Region VIII
Office of Enforcement, Compliance and
Environmental Justice (mail code 8ENF)
999 18th Street, Suite 300
Denver, CO 80202-2466

For reports, notifications, or other correspondence
related to permit modifications, applications, etc.

Environmental Protection Agency, Region VIII
Office of Partnerships & Regulatory Assistance
Air & Radiation Program (mail code 8P-AR)
999 18th Street, Suite 300
Denver, CO 80202-2466
Phone: 303-312-6440

I.T. Reopening for Cause.

- I.T.1 A permit shall be reopened and revised under any of the following circumstances:

- I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))
- I.T.1.b The Executive Secretary or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))
- I.T.1.c EPA or the Executive Secretary determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))
- I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))
- I.T.2 Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

I.U. Inventory Requirements.

- I.U.1 An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)
- I.U.2 A Hazardous Air Pollutant Inventory shall be submitted in accordance with the procedures of R307-155, Hazardous Air Pollutant Inventory. (R307-155)

Section II: SPECIAL PROVISIONS

- II.A. **Emission Unit(s) Permitted to Discharge Air Contaminants.**
(R307-415-4(3)(a) and R307-415-4(4))
- II.A.1 **Raw Material Fugitive Sources** (designated as Unit #1)
Unit Description: Includes scrap steel delivery, stockpiles, and loading. No unit-specific applicable requirements.
- II.A.2 **Lime Silo #1 and #2 Baghouse Vents** (designated as Unit #2 & 3)
Unit Description: Controls emissions when the lime/dolomite storage silos are filled by pneumatic transfer.
- II.A.3 **Lime Handling Fugitive Sources** (designated as Unit #4)
Unit Description: Includes lime/dolomite delivery, stockpiling, conveyor and batching operations, feed bin stocking, and conveyor drop to charge bucket.
- II.A.4 **Carbon Silo # 1 and #2 Baghouse Vents** (designated as Unit #6 & 7)
Unit Description: Controls particulate emissions generated when carbon is pneumatically loaded into the silos.
- II.A.5 **Electric Arc Furnaces** (designated as Unit #EAF 1 & 2)
Unit Description: Two 65-ton electric arc furnaces equipped with lances and burners controlled by a direct emission control (DEC) system during melting/refining and by a canopy evacuation system during charging/tapping. Both exhaust to the EAF baghouse.
- II.A.6 **Alloy Handling** (designated as Unit #8)
Unit Description: Includes dust from alloy delivery, storage, and transfer to charge bucket.
- II.A.7 **EAF Baghouse Vent** (designated as Unit #9)
Unit Description: Emissions from the EAF furnaces captured by either the DEC or canopy flow through a spark arrestor then through the EAF baghouse before being vented
- II.A.8 **EAF Dust Handling Fugitive Sources** (designated as Unit #11)
Unit Description: Includes EAF dust loading into gondola cars, EAF baghouse hoppers and conveyors, dust storage silo, and EAF dust loading to rail cars/trucks.
- II.A.9 **Caster Roof Monitor** (designated as Unit #12)
Unit Description: Includes meltshop fugitive emissions from the ladle and tundish preheat systems, tundish/ladle skull lancing, wire alloy addition/steel stirring, and torches/cutting operations. EAF emissions not captured by the canopy or DEC may also vent at this area.
- II.A.10 **Billet Reheat Furnace #1** (designated as Unit #13)
Unit Description: Natural gas or propane fired furnace rated to consume 1320 MMcf/yr of natural gas.
- II.A.11 **Billet Reheat Furnace #2** (designated as Unit #14)
Unit Description: Natural gas or propane fired furnace rated to consume 980 MMcf/yr of natural gas.
- II.A.12 **Roll Mill** (designated as Unit #15)
Unit Description: Includes hot steel rolling, and steel product burning. No unit-specific applicable requirements.
- II.A.13 **Contact Cooling Towers** (designated as Unit #17 & 18)
Unit Description: Two cooling towers used to cool general-use contact cooling water. No unit-specific applicable requirements.
- II.A.14 **Non-Contact Cooling Towers** (designated as Unit #19 & 20)

Unit Description: Two cooling towers used to cool non-contact cooling water. No unit-specific applicable requirements.

II.A.15 **Caster Cooling Tower** (designated as Unit #21)

Unit Description: Cooling tower for contact water used for the casting operations. No unit-specific applicable requirements.

II.A.16 **Unpaved Roadway Fugitives** (designated as Unit #24 a & b)

Unit Description: Fugitive emissions from unpaved haul and service roads.

II.A.17 **Paved Roadway Fugitives** (designated as Unit #24 c & d)

Unit Description: Fugitive emissions from paved haul and service roads.

II.A.18 **Miscellaneous tank emissions** (designated as Unit #TANKS)

Unit Description: Includes emissions from HCl storage tank, used oil storage tanks, two aboveground diesel storage tanks, aboveground gasoline storage tank, and propane tank venting. No unit-specific applicable requirements.

II.A.19 **Painting and solvent cleaning activities** (designated as Unit #MISC VOC)

Unit Description: Various process-related solvent cleaning (including parts washers) and architectural painting activities that emit volatile organic compounds. Janitorial cleaners are not included in this grouping.

II.A.20 **Miscellaneous emissions** (designated as Unit #MISC)

Unit Description: Includes emissions from desalination plant, acetylene combustion, natural gas/propane combustion for comfort heating, slag handling and lab. No unit-specific applicable requirements.

II.A.21 **Selected 10% Opacity Emission Units** (designated as Unit #10% Opacity)

Unit Description: Lime Silo # 1 and #2 baghouse vents, Carbon Silo #1 and #2 baghouse vents, alloy handling, and lime handling fugitive sources.

II.A.22 **Emergency equipment** (designated as Unit #EMERG)

Unit Description: Includes emissions from miscellaneous diesel, natural gas and propane fueled emergency generators and pumps, and propane flare. No unit-specific applicable requirements.

II.A.23 **Sandblasting operations** (designated as Unit #SAND)

Unit Description: Sandblasting operations conducted in a 3- or 4-sided, roofed structure.

II.A.24 **Diethylene glycol storage tank** (designated as Unit #DEGTANK)

Unit Description: Aboveground diethylene glycol storage tank, 12000 gallon capacity, holding material < 0.05 mmHg.

II.B. **Requirements and limitations.**

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated: (R307-415-6a(1))

II.B.1 **Conditions on permitted source (Source-wide):**

II.B.1.a Visible emissions shall be no greater than 20 percent opacity except as otherwise specified in this permit. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.1.a.1 **Monitoring:** A visual opacity survey of each affected emission unit shall be performed on a weekly basis by an individual trained on the observation procedures of

40 CFR 60, Appendix A, Method 9. If visible emissions other than steam are observed from an emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial survey. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9.

When the survey is conducted by a certified observer, the opacity of each visible emission may be estimated and a reference method observation made of the emission point of highest estimated opacity. If this observation shows compliance with this limitation, no further observations are necessary. If compliance is not demonstrated, reference method observations shall be conducted of each point in order of estimated opacity until an observation shows compliance.

II.B.1.a.2	Recordkeeping:	Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
II.B.1.a.3	Reporting:	There are no reporting requirements for this provision except those specified in Section I of this permit.
II.B.1.b	Sulfur content of fuel oil shall be no greater than 0.5 % by weight. [Authority granted under R307-203-1(1) and R307-401(6) [BACT]; condition originated in DAQE-787-01]	
II.B.1.b.1	Monitoring:	Sulfur content shall be determined by inspection of the fuel sulfur-content specifications provided by the vendor in purchase records. Sulfur content shall be determined in accordance with ASTM-D-4294, or equivalent. As an alternative, verification of the sulfur content may be shown by providing copies of fuel receipts indicating that #2 fuel oil or lighter are purchased.
II.B.1.b.2	Recordkeeping:	Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
II.B.1.b.3	Reporting:	There are no reporting requirements for this provision except those specified in Section I of this permit.
II.B.1.c	Natural gas consumption shall be no greater than 2,340 MMSCF per 12 month period not including fuel consumed by oxyfuel burners for the EAFs. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]	
II.B.1.c.1	Monitoring:	Natural gas consumption shall be determined using billing statements for the previous twelve months, with the appropriate conversion of acf to scf. The amount of fuel consumed by the EAF oxyfuel burners may be subtracted from the total gas consumption.
II.B.1.c.2	Recordkeeping:	Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
II.B.1.c.3	Reporting:	There are no reporting requirements for this provision except those specified in Section I of this permit.
II.B.1.d	Propane consumption shall be no greater than 2,800,000 gallons per 12 month period not including fuel	

consumed by oxyfuel burners for the EAFs. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

- II.B.1.d.1 **Monitoring:** Propane consumption shall be determined using billing statements for the previous twelve months. The amount of fuel consumed by the EAF oxyfuel burners may be subtracted from the total gas consumption.
- II.B.1.d.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
- II.B.1.d.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.1.e Consumption of #2 fuel oil shall be no greater than 285,000 gallons per 12 month period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]
- II.B.1.e.1 **Monitoring:** Fuel oil consumption shall be determined by oil purchase and inventory records. Each calendar month, a new 12-month total shall be calculated using data from the previous 12 months.
- II.B.1.e.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
- II.B.1.e.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.1.f At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any permitted plant equipment, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Authority granted under R307-401-5 and 40 CFR 60.11(d); condition originated in DAQE-787-01]
- II.B.1.f.1 **Monitoring:** Records required for this permit condition will serve as monitoring.
- II.B.1.f.2 **Recordkeeping:** Permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.
- II.B.1.f.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.1.g All conveyor transfer points and batching equipment drop points shall either be enclosed or be equipped with water sprays to be used whenever dry conditions warrant for dust control. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]
- II.B.1.g.1 **Monitoring:** All non-enclosed points shall have visible emissions observed weekly, conducted according to 40 CFR 60, Appendix A, Method 22. The adequacy of the water sprays shall be determined by the lack of visual emissions.

- II.B.1.g.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
- II.B.1.g.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.1.h The permittee shall comply with the applicable requirements for servicing of motor vehicle air conditioners pursuant to 40 CFR 82, Subpart B - Servicing of Motor Vehicle Air Conditioners. [Authority granted under 40 CFR 82.30(b); condition originated in 40 CFR 82.30(b)]
- II.B.1.h.1 **Monitoring:** The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart B.
- II.B.1.h.2 **Recordkeeping:** All records required in 40 CFR 82, Subpart B shall be maintained consistent with the requirements of Provision S.1 in Section I of this permit.
- II.B.1.h.3 **Reporting:** All reports required in 40 CFR 82, Subpart B shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.
- II.B.1.i The permittee shall comply with the applicable requirements for recycling and emission reduction for class I and class II refrigerants pursuant to 40 CFR 82, Subpart F - Recycling and Emissions Reduction. [Authority granted under 40 CFR 82.150(b); condition originated in 40 CFR 82.150(b)]
- II.B.1.i.1 **Monitoring:** The permittee shall certify, in the annual compliance statement required in Section I of this permit, its compliance status with the requirements of 40 CFR 82, Subpart F.
- II.B.1.i.2 **Recordkeeping:** All records required in 40 CFR 82, Subpart F shall be maintained consistent with the requirements of Provision S.1 in Section I of this permit.
- II.B.1.i.3 **Reporting:** All reports required in 40 CFR 82, Subpart F shall be submitted as required. There are no additional reporting requirements except as outlined in Section I of this permit.
- II.B.1.j A Risk Management Plan (RMP) developed in accordance with 40 CFR Part 68 shall be submitted to the United States Environmental Protection Agency not later than the applicable date in 40 CFR 68.10(a). [Authority granted under 40 CFR 68; condition originated in 40 CFR Part 68]
- II.B.1.j.1 **Monitoring:** The record serves as monitoring.
- II.B.1.j.2 **Recordkeeping:** A copy of the Risk Management Plan shall be available to the Executive Secretary upon request along with a copy of the transmittal letter to EPA.
- II.B.1.j.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2 **Conditions on Electric Arc Furnaces (Unit #EAF 1 & 2):**

- II.B.2.a Visible emissions shall be less than 6 percent opacity during meltdown and refining periods for emissions due solely to the operation of any EAF(s). [Authority granted under 40 CFR 60.272(a)(3) and R307-401-6(1) [BACT]; condition originated in DAQE-787-01]
- II.B.2.a.1 **Monitoring:** Opacity observations shall be conducted at least once per day when at least one furnace is operating in the meltdown and refining period. Observations shall be done by a certified visible emission observer in accordance with 40 CFR 60, Appendix A, Method 9. Shop opacity shall be recorded for any point(s) where visible emissions are observed in proximity to an affected EAF. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.
- II.B.2.a.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
- II.B.2.a.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.2.b Visible emissions shall be less than 20 percent opacity during charging periods and no greater than 20 percent opacity during tapping periods for emissions due solely to the operation of any EAF(s). [Authority granted under 40 CFR 60.272(a)(3) and R307-401-6(1) [BACT]; condition originated in DAQE-787-01]
- II.B.2.b.1 **Monitoring:** Opacity observations shall be conducted at least once every six months and during any performance tests for determining fan ampere and damper settings. The observations shall be performed when at least one furnace is operating in the meltdown and refining period. Observations shall be done by a certified visible emission observer in accordance with 40 CFR 60, Appendix A, Method 9. Shop opacity shall be recorded for any point(s) where visible emissions are observed in proximity to an affected EAF. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.
- II.B.2.b.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
- II.B.2.b.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.2.c The scrap steel feed rate shall be no greater than 1,400,000 tons per 12-month period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]
- II.B.2.c.1 **Monitoring:** Permittee shall determine a rolling 12 - month total, each month. The permittee shall calculate a new 12 - month total based on the first day of

each fiscal month using data from the previous 12 months. Scrap weight shall be the total weight charged to each heat.

II.B.2.c.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.2.c.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.d Hours of operation shall be no greater than 8200 hours per 12 month period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.2.d.1 **Monitoring:** The permittee shall calculate a 12-month total based on the first day of each month using data from the previous 12 months. Hours of operation shall be determined by supervisor's monitoring and maintenance of a daily operations log.

II.B.2.d.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.2.d.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.e The permittee shall maintain records daily of the time and duration of each charge and each tap. [Authority granted under 40 CFR 60.274(a) (Subpart AA); condition originated in DAQE-787-01]

II.B.2.e.1 **Monitoring:** Records required for this permit condition will serve as monitoring.

II.B.2.e.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.2.e.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3 **Conditions on EAF Baghouse Vent (Unit #9):**

II.B.3.a Visible emissions shall be less than 3 percent opacity. [Authority granted under 40 CFR 60.272(a)(2) and R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.3.a.1 **Monitoring:** Visible emissions observations shall occur at least once per day of operation. The observations shall occur when the furnace is operating in the melting and refining period. These observations shall be taken in accordance with Method 9, and, for at least three 6-minute periods, the opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute observations will be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.

II.B.3.a.2	Recordkeeping:	Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
II.B.3.a.3	Reporting:	There are no reporting requirements for this provision except those specified in Section I of this permit.
II.B.3.b	A minimum of five fans shall be operated at all times when the baghouse is in operation. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]	
II.B.3.b.1	Monitoring:	The number of fans in operation on the EAF baghouse shall be checked once per day.
II.B.3.b.2	Recordkeeping:	Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
II.B.3.b.3	Reporting:	There are no reporting requirements for this provision except those specified in Section I of this permit.
II.B.3.c	The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the EAF emissions total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of hole in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed. [Authority granted under 40 CFR 60.274(e) (Subpart AA); condition originated in DAQE-787-01]	
II.B.3.c.1	Monitoring:	Records required for this permit condition will serve as monitoring.
II.B.3.c.2	Recordkeeping:	Results of monthly inspections and any maintenance performed shall be recorded and maintained as described in Provision I.S.1 of this permit.
II.B.3.c.3	Reporting:	There are no reporting requirements for this provision except those specified in Section I of this permit.
II.B.3.d	<p>The permittee shall calibrate and maintain a fan ampere and damper setting system. This system shall provide records of fan operations with readings taken once per shift and provide a fan operation log that records excursion events such as fan shut downs and startups.</p> <p>Required fan amperes and damper positions shall be those established during the most recent compliance test of the system. The permittee may petition the Executive Secretary for re-establishment of these parameters whenever the EAF operating conditions upon which the parameters were previously established are no longer applicable.</p> <p>As an alternative, the permittee may install, operate and maintain either a continuous volumetric monitoring device, or a negative pressure monitoring system (subsequent to performing an initial compliance test) meeting the following requirements:</p> <p>Continuous volumetric monitoring device: This system shall provide a continuous record of air flow in all ducts evacuating the EAFs and roof canopy. The monitoring device may be installed in any location in the exhaust ducts such that reproducible flow rate monitoring will result. The flow rate monitoring device(s) shall have an accuracy</p>	

of plus or minus 10% over its normal operating range and shall be calibrated according to manufacture's instructions. The Executive Secretary may require the permittee to demonstrate the accuracy of the monitoring device(s) according to method 1 and 2, Appendix A, 40 CFR 60. Required air flows will be those established during the initial compliance test. The initial compliance test shall measure the exhaust flow and damper settings for each separate duct and be recorded during the charging, melting, and tapping stages for each EAF.

Negative pressure monitoring system:

This system shall consist of a monitoring device that continuously records the negative pressure in each duct for all ducts used to evacuate the emissions from the EAFs. The pressure shall be recorded as 15-minute integrated averages. The monitoring devices shall be installed in any appropriate location in the ducts such that reproducible results are obtained and shall be upstream of any damper in the duct. The pressure monitoring device shall have an accuracy of plus or minus five (5) mm of water gauge over its normal operating range and shall be calibrated according to manufacture's instructions. Measurement of the minimum negative pressure recorded during the initial performance test for each duct shall be the minimum allowed negative pressure during charging, melting and tapping stages for each furnace. The permittee shall maintain a log of the negative pressure in integrated 15-minute averages of each furnace during all stages. The initial compliance test shall measure the negative pressure in each separate duct and record during charging, melting, and tapping stages for each furnace. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

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| II.B.3.d.1 | Monitoring: | <p>(a) During normal operational periods, records required for this permit condition will serve as monitoring.</p> <p>(b) If a performance test of a system allowed in this provision is to be conducted, the permittee shall advise the Executive Secretary of the test date at least 30 days prior to the test. Shop opacity observations shall be conducted in accordance with 40 CFR 60.11, which requires a minimum of three hours of observations (30 6-minute averages). During the test, the permittee shall monitor the parameters appropriate to the system tested during the charging, melting and tapping stages for each furnace:</p> <p style="padding-left: 40px;">(i) Fan amperage and damper settings: the number of fans operating, average fan amperage and damper positions for each separate duct.</p> <p style="padding-left: 40px;">(ii) Continuous volumetric monitoring device: the exhaust flow rate and damper settings for each separate duct.</p> <p style="padding-left: 40px;">(iii) Negative pressure monitoring system: the negative pressure in each separate duct.</p> |
| II.B.3.d.2 | Recordkeeping: | Results of monitoring shall be maintained as described in Provision I.S.1 of this permit. |
| II.B.3.d.3 | Reporting: | There are no reporting requirements for this provision except those specified in Section I of this permit. |
| II.B.3.e | Emissions of CO shall be no greater than 997.5 lbs/hr based on an 1-hour average. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01] | |
| II.B.3.e.1 | Monitoring: | Stack testing shall be performed as specified here: |

(a) Frequency. The source shall be tested yearly from the date of the last stack test. Tests may also be required at the direction of the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Methods.

(1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(2) To determine stack volumetric flow rate - 40 CFR 60, Method 2.

(3) To test for CO emissions - 40 CFR 60, Appendix A, Method 10, 10A, or 10B.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors to give the results in the specified units of the emission limitation.

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. During testing, at least one of the two furnaces shall be operating in the melting stage.

II.B.3.e.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.3.e.3 **Reporting:** In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Executive Secretary within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.3.f Emissions of CO shall be no greater than 973.2 lbs/hr based on an 8-hour average. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.3.f.1 **Monitoring:** Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested if the results from the yearly CO (1 hr. average) test exceeds 90% of the numerical value of the (8 hr. average) limit. If required, this test shall take place within 120 days of the yearly CO (1 hr. average) test.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Methods.

(1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(2) To determine stack volumetric flow rate - 40 CFR 60, Method 2.

(3) To test for CO emissions - 40 CFR 60, Appendix A, Method 10, 10A, or 10B.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors to give the results in the specified units of the emission limitation.

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. During testing, at least one of the two furnaces shall be operating in the melting stage.

II.B.3.f.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.3.f.3 **Reporting:** In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Executive Secretary within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.3.g Emissions of NO_x shall be no greater than 47.25 lbs/hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.3.g.1 **Monitoring:** Stack testing shall be performed as specified here:

(a) Frequency. The source shall be tested every three years, from the date of the last stack test. Tests may also be required at the direction of the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Methods.

(1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(2) To determine stack volumetric flow rate - 40 CFR 60, Method 2.

(3) To test for NO_x emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors to give the results in the specified units of the emission limitation.

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. During testing, at least one of the two furnaces shall be operating in the melting stage.

II.B.3.g.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.3.g.3 **Reporting:** In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Executive Secretary within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.3.h Emissions of TSP shall be no greater than 25.07 lbs/hr and 0.0030 grains/dscf (68 degrees F, and 29.92 in Hg). [Authority granted under R307-401-6(1) [BACT] and 40 CFR 60.272(a)(1); condition originated in DAQE-787-01]

II.B.3.h.1 **Monitoring:** Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested every year from the date of the last stack test. Tests may also be required at the direction of the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Methods.

(1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety

and Health Administration (OSHA) approved access shall be provided to the test location.

(2) Sample Method - 40 CFR 60. Appendix A, Method 5D. The minimum sample time and sample volume shall be 4 hours and 160 dscfm.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. (R307-165-1)

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. During testing, at least one of the two furnaces shall be operating in the melting stage.

II.B.3.h.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.3.h.3 **Reporting:** In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Executive Secretary within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.3.i Emissions of PM₁₀ shall be no greater than 20.06 lbs/hr and 0.0024 grains/dscf (68 degrees F, and 29.92 in Hg). [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.3.i.1 **Monitoring:** Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested yearly from the date of the last stack test. Tests may also be required at the direction of the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Methods.

(1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(2) For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201, 201a or 202. The back half condensibles shall also be tested using a method specified by the Executive Secretary.

(3) For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate. The back half condensibles shall also be tested using a method specified by the Executive Secretary. All particulate captured shall be considered PM₁₀, however the back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

(4) Alternatively, 40 CFR 60, Appendix A, Method 5D may be used to determine total TSP emissions. If TSP emissions are below the PM₁₀ limit that will constitute compliance with the PM₁₀ limit. If TSP emissions are not below the PM₁₀ limit, the permittee shall retest using the methods allowed in paragraphs (1)-(3) above within 180 days of the TSP test date.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. (R307-165-1)

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. During testing, at least one of the two furnaces shall be operating in the melting stage.

II.B.3.i.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.3.i.3 **Reporting:** In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Executive Secretary within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.3.j Emissions of SO₂ shall be no greater than 19.95 lbs/hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.3.j.1 **Monitoring:** Stack testing shall be performed as specified here:

(a) Frequency. Emissions shall be initially tested within eighteen months from the original issuance date of this permit, then at least once every five years afterward. Tests may also be required at the direction of the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) Methods.

(1) Sample Location - the emission point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(2) To test for SO₂ emissions - 40 CFR 60, Appendix A, Method 6, 6A, 6B, or 6C.

(3) To determine stack gas velocity and volumetric flow rate - 40 CFR 60, Appendix A, Method 2.

(d) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. In addition, values must be corrected to 7% excess oxygen as appropriate.

(e) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. During testing, at least one of the two furnaces shall be operating in the melting stage.

II.B.3.j.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.3.j.3 **Reporting:** In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Executive Secretary within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.3.k Emissions of VOC shall be no greater than 8.5 lbs/hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.3.k.1 **Monitoring:** Stack testing shall be performed as follows:

(a) Frequency. Emissions shall be initially tested within eighteen months from the original issuance date of this permit and every five years thereafter. The source may also be tested at any time if directed by the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 5D for monovent baghouses. Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d) VOC emissions shall be determined by simultaneously using EPA Method 25A (Total Gaseous Organic concentration) with two analyzers, with one analyzer configured to read only methane. The difference between the total organic detector and the methane detector shall constitute the VOC measurement. Method 2 shall be used to determine stack gas velocity and volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation.

(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. During testing, at least one of the two furnaces shall be operating in the melting stage.

II.B.3.k.2 **Recordkeeping:** Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.3.k.3 **Reporting:** In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Executive Secretary within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.

II.B.4 **Conditions on EAF Dust Handling Fugitive Sources (Unit #11):**

II.B.4.a Visible emissions shall be less than 10 percent opacity. [Authority granted under 40 CFR 60.272(b); condition originated in 40 CFR 60 Subpart AA]

II.B.4.a.1 **Monitoring:** Opacity observations of dust-handling activities shall be conducted each January and July. An opacity observation shall be performed in accordance with 40 CFR 60, Appendix A, Method 9 on the emission unit that appears to have the highest opacity. If this unit does not exceed the opacity limitation, no further observations of any of the emission units will be required. If this unit exceeds the opacity limitation, the emission unit with the next highest opacity shall be observed until an emission unit does not exceed the opacity limitation. All emission units not observed shall be considered to not exceed the opacity limitation.

II.B.4.a.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.4.a.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5 **Conditions on Billet Reheat Furnace #1 (Unit #13):**

II.B.5.a	Emissions of NO _x shall be no greater than 20.71 lbs/hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]
II.B.5.a.1	<p>Monitoring: Stack testing shall be performed as specified here:</p> <p>(a) Frequency. The source shall be tested every three years from the date of the last stack test. Tests may also be required at the direction of the Executive Secretary.</p> <p>(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.</p> <p>(c) The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.</p> <p>(d) Methods to be used:</p> <p>(1) To determine stack volumetric flow rate - 40 CFR 60, Method 2.</p> <p>(2) To test for NO_x emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.</p> <p>(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors to give the results in the specified units of the emission limitation.</p> <p>(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (R307-165-3)</p>
II.B.5.a.2	<p>Recordkeeping: Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.</p>
II.B.5.a.3	<p>Reporting: In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Executive Secretary within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.</p>
II.B.6	<u>Conditions on Billet Reheat Furnace #2 (Unit #14):</u>
II.B.6.a	Emissions of NO _x shall be no greater than 16.73 lbs/hr. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.6.a.1	Monitoring:	<p>Stack testing shall be performed as specified here:</p> <p>(a) Frequency. The source shall be tested every three years from the date of the last stack test. Tests may also be required at the direction of the Executive Secretary.</p> <p>(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.</p> <p>(c) The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.</p> <p>(d) Methods to be used:</p> <p>(1) To determine stack volumetric flow rate - 40 CFR 60, Method 2.</p> <p>(2) To test for NO_x emissions - 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.</p> <p>(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors to give the results in the specified units of the emission limitation.</p> <p>(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years. (R307-165-3)</p>
II.B.6.a.2	Recordkeeping:	Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
II.B.6.a.3	Reporting:	In addition to the reporting requirements of Section I of this permit, the permittee shall submit the results of the stack tests to the Executive Secretary within 60 days of completion of the testing. Results shall clearly identify test results as compared to permit limits and indicate compliance status.
II.B.7	<u>Conditions on Unpaved Roadway Fugitives (Unit #24 a & b):</u>	
II.B.7.a	Visible emissions shall be no greater than 20 percent opacity. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]	
II.B.7.a.1	Monitoring:	Unpaved roads and other operational areas that are used by mobile

equipment shall be water sprayed and/or chemically treated in sufficient frequency and quantity to maintain the surface material in a damp/moist condition except when freezing conditions exist.

II.B.7.a.2 **Recordkeeping:** Records of water treatment shall be kept for all periods including the following items: date, number of treatments made, dilution rate, and quantity, rainfall received if any and the approximate amount, and the time of day treatments were made.

II.B.7.a.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.8 **Conditions on Paved Roadway Fugitives (Unit #24 c & d):**

II.B.8.a Visible emissions shall be no greater than 10 percent opacity. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.8.a.1 **Monitoring:** Paved roads shall be periodically swept or water flushed as conditions warrant.

II.B.8.a.2 **Recordkeeping:** Records of cleaning paved roads shall be kept as described in Provision I.S.1 of this permit.

II.B.8.a.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.9 **Conditions on Painting and solvent cleaning activities (Unit #MISC VOC):**

II.B.9.a Emissions of VOC shall be no greater than 6.75 tons per 12-month period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.9.a.1 **Monitoring:** Compliance with the limitation shall be determined on a rolling 12-month total. Based on the first day of each month a new 12-month total shall be calculated using the previous 12 months data.

II.B.9.a.2 **Recordkeeping:** Records shall include the following data for each item used:

- (1) Name of the VOC emitting material, such as: paint, adhesive, solvent, thinner, reducers, chemicals, compounds, toxics, isocyanates, etc;
- (2) Quantity of VOC-containing materials used (gallons);
- (3) Density of VOC-containing materials used (pounds per gallon);
- (4) Percent by weight of all VOCs in each material.
- (5) The total quantity of VOCs used each month shall be the sum of the VOC usage calculated for each material by the following procedure:

VOC usage (lbs) = [% VOC by Weight/100] x [Density (lb/gal)] x
[Quantity Consumed (gal)]

VOC usage (tons) = VOC usage (lbs) / 2000

(6) The quantity of VOC reclaimed for the month shall be similarly quantified and subtracted from the quantities calculated in step (5), to provide the monthly total VOC emissions.

II.B.9.a.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.10 **Conditions on Selected 10% Opacity Emission Units (Unit #10% Opacity):**

II.B.10.a Visible emissions shall be no greater than 10 percent opacity. [Authority granted under R307-401-6(1) [BACT] and 40 CFR 60.272(b) [Subpart AA]; condition originated in DAQE-787-01]

II.B.10.a.1 **Monitoring:** Opacity observations of dust-handling activities shall be conducted each January and July. An opacity observation shall be performed in accordance with 40 CFR 60, Appendix A, Method 9 on the emission unit that appears to have the highest opacity. If this unit does not exceed the opacity limitation, no further observations of any of the emission units will be required. If this unit exceeds the opacity limitation, the emission unit with the next highest opacity shall be observed until an emission unit does not exceed the opacity limitation. All emission units not observed shall be considered to not exceed the opacity limitation.

II.B.10.a.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.

II.B.10.a.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.11 **Conditions on Emergency equipment (Unit #EMERG):**

II.B.11.a Emergency generators shall be used for electricity producing operation only during the periods when electric power from the public utilities is interrupted or during maintenance. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-787-01]

II.B.11.a.1 **Monitoring:** Records required for this permit condition will serve as monitoring.

II.B.11.a.2 **Recordkeeping:** Records documenting generator usage shall be kept in a log and they shall show the date the generator was used, the duration in hours of the of generator usage, and the reason for each generator usage. Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.11.a.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.12 **Conditions on Sandblasting operations (Unit #SAND):**

- II.B.12.a The permittee shall comply with the applicable visible emission and performance standards required in R307-206-2, Abrasive Blasting. [Authority granted under R307-206-2; condition originated in DAQE-787-01]
- II.B.12.a.1 **Monitoring:** a. Visible emissions evaluations shall be conducted as required in R307-206-3 every six months if abrasive blasting operations are conducted.
- b. Documentation that demonstrates adherence to the performance standards in R307-206-4 shall be maintained.
- II.B.12.a.2 **Recordkeeping:** Records of visible emissions evaluations and documentation that demonstrates adherence to the performance standards in R307-206-4 shall be maintained.
- II.B.12.a.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.B.13 **Conditions on Diethylene glycol storage tank (Unit #DEGTANK):**
- II.B.13.a The permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be kept for the life of the source. [Authority granted under 40 CFR 60.112b(b); condition originated in DAQE-787-01]
- II.B.13.a.1 **Monitoring:** Records required for this permit condition will serve as monitoring.
- II.B.13.a.2 **Recordkeeping:** Results of monitoring shall be maintained as described in Provision I.S.1 of this permit.
- II.B.13.a.3 **Reporting:** There are no reporting requirements for this provision except those specified in Section I of this permit.
- II.C. **Emissions Trading.** (R307-415-6a(10))
Not applicable to this source.
- II.D. **Alternative Operating Scenarios.** (R307-415-6a(9))
Not applicable to this source.

Section III: PERMIT SHIELD

- III.A. A permit shield was not granted for any specific requirements.

Section IV: ACID RAIN PROVISIONS.

- IV.A. This source is not subject to Title IV. This section is not applicable.

REVIEWER COMMENTS

This operating permit incorporates all applicable requirements contained in the following documents:

DAQE-787-01 dated September 14, 2001

1: Comment on an item originating in this permit regarding permitted source (Source-wide):

Nucor fiscal year definition: This permit refers to a fiscal year. For accounting purposes Nucor's year is divided up into 52 week periods. The year begins on the Sunday closest to January 1. [Comment last updated on 12/15/1999]

2: Comment on an item originating in R307-203-1 regarding permitted source (Source-wide):

Alternative Sulfur Content of Fuel Monitoring: Nucor requested and received approval to perform alternative monitoring to verify compliance with the sulfur content of diesel fuel (DF). The alternative monitoring consisted of verification that #2 diesel fuel was being burned (see DAQ letter DAQE-1209-95 dated December 26, 1995). The equipment that burns diesel fuel at Nucor is only capable of burning #2, or lighter; therefore to monitor that all they burn is #2 diesel fuel is environmentally inconsequential. To burn another fuel would require an NSR action at a minimum. Therefore, the verification of sulfur content required in the permit condition may be met by demonstrating that only #2 or lighter diesel fuel is used. Starting with DAQE-787-01, Nucor is subject to a sulfur limit of 0.5 wt%, which is more stringent than the 0.85 lb/MMBtu limit previously imposed (0.5 wt% in #2 DF is about 0.26 lb/MMBtu, based on density of 7.3 lb/gal and 139,600 Btu/gal). The approved alternate monitoring is still appropriate. [Comment last updated on 10/15/2001]

3: Comment on an item originating in R307-205 regarding permitted source (Source-wide):

Fugitive dust requirements: Fugitive dust rules at R307-205-4 apply. However, the BACT conditions for paved and unpaved roads in this approval order are at least as stringent. Therefore, the BACT requirements are included in the permit. [Comment last updated on 7/10/2000]

4: Comment on an item originating in DAQE-160-00 regarding Electric Arc Furnaces (Unit EAF 1 & 2):

Initial visible emissions testing requirement and subsequent test monitoring: Condition #10 of Approval Order DAQE-160-00 required initial visible emissions testing to be performed within 180 days of the date of the AO. This requirement originally applied to the initial performance testing required by 40 CFR 60, Subpart AA (60.275(e)(3)). This testing was completed successfully in March 1998 and therefore the condition was not transferred directly to the operating permit.

Language is included in the monitoring condition for the fan amp system that covers the monitoring elements required during a performance test. However, no date or time frame is established in this permit for the test; that is determined through NSR and source actions. [Comment last updated on 3/28/2000]

5: Comment on an item originating in 40 CFR 60 Subpart AA regarding Electric Arc Furnaces (Unit EAF 1 & 2):

NSPS opacity monitoring clarification: 60.271(k) defines shop opacity as the arithmetic average of 24 or more opacity observations of emissions from the shop taken in accordance with Method 9 ... for the applicable time periods. EPA regional staff previously expressed concern over the potential to read this as requiring a series of 24 six-minute Method 9 readings (i.e., 144 minutes). Method 9 states that a minimum of 24 observations shall be made at 15-second intervals. The inclusion of the phrase for applicable time periods appears to infer that a standard six-minute observation is meant, with multiple six-minute observations required for different regulatory purposes.

60.273(d) states Shop opacity shall be determined as the arithmetic average of 24 or more consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9. This seems to confirm the above interpretation. However, Division staff interprets the language at 60.273(d) to be an unnecessary restatement of Method 9 requirements, and has included the NSPS monitoring language with only the reference to Method 9 and without the reference to 24 or more consecutive observations to make this interpretation clear. [Comment last updated on 3/28/2000]

6: Comment on an item originating in 40 CFR 60 Subpart AA regarding Electric Arc Furnaces (Unit EAF 1 & 2):

Shop opacity limit - stringency review: NSPS Shop Opacity Limits: Subpart AA at 60.272(a)(3) forbids emissions that exhibit 6 percent or greater opacity. The current approval order states that visible emissions shall not exceed 6 percent opacity. The NSPS is more stringent and is the limit included in the operating permit. Also, at 60.272(a)(3)(ii), the NSPS states that "shop opacity less than 40 percent may occur during tapping periods". The current approval order states that visible emissions shall not exceed 20 percent opacity. The approval order condition is more stringent and is the limit included in the operating permit. The current approval order and the NSPS agree on the opacity limit during charging. In all three cases, both BACT and the NSPS are cited as underlying authority. [Comment last updated on 3/26/2000]

7: Comment on an item originating in 40 CFR 60 Subpart AA regarding Electric Arc Furnaces (Unit EAF 1 & 2):

Shop opacity limit - timing exemption review: EPA regional staff previously expressed concern over the applicability of shop opacity standards given the exemption in 40 CFR 60.272(a)(3)(iii). At the time, the current approval order contained BACT shop opacities that applied continuously. Since the comment was made, Subpart AA has been amended to allow for daily observations of the shop opacities as a monitoring alternative to furnace static pressure monitoring. This source has chosen that alternative, so the exemption in 60.272(a)(3)(iii) does not apply to the melting/refining opacity limit (<6%).

The exemption would normally apply to the charging and tapping opacity limits; however, as stated above, these are also BACT terms in the approval order, and will be subject to the periodic monitoring given in the permit. [Comment last updated on 3/26/2000]

8: Comment on an item originating in 40 CFR 60 Subpart AA regarding Electric Arc Furnaces (Unit EAF 1 & 2):

Shop opacity limit - roof exemption review: EPA regional staff previously expressed concern over the applicability of language in 40 CFR 60.272(a)(4). Division staff cannot locate this citation, and from the text of the comment conclude that EPA was referring to 60.272(a)(3)(iv), which addresses roof openings. The shop roof at this source cannot be opened, so this language does not apply [Comment last updated on 3/26/2000]

9: Comment on an item originating in DAQE-160-00 regarding EAF Baghouse Vent (Unit 9):

Monitoring of two CO limits: Nucor has two CO limits, an eight hour average and a one hour average. The one hour limit is required to be tested yearly. Based on past results of this one hour limit (232.5 lb/hr in 98, 155.7 lb/hr in 97, 145.48 lb/hr in 96) which are well below the limit of 997.5 lb/hr, the eight hour limit (973.2 lb/hr) should also be met. Therefore the eight hour limit is only required to be tested should the one hour test results be within 90% of the eight average limit of 973.2 lb/hr. This test would be required to be accomplished within the time period outlined in the permit. [Comment last updated on 3/28/2000]

10: Comment on an item originating in DAQE-160-00 regarding EAF Baghouse Vent (Unit 9):

SO₂ limit: The SO₂ limit remains in the permit as it is used to evaluate PSD increment. The SO₂ limit apparently originated in a Feb 10, 1988 Approval Order issued by the state. As explained in AP-42, Section 12.5, Iron and Steel Production, paragraph 12.5.2.5, it is difficult to quantify emissions from charging scrap in an EAF because they depend on the grade of scrap utilized. Since the emissions will be dependent on the scrap being fed to the EAF, it is not expected that the SO₂ emissions will be of any significance. The SO₂ limit was apparently first established by using an emission estimate in terms of tons per year which first appears in an EPA Technical Review Document (copy on file at DAQ - date is undecipherable but document was rec'd at DAQ Dec 4, 1981). This estimate was divided by the maximum production rate and 8760 hours to develop an emission factor in terms of lbs SO₂ per ton of feed, making violation of the limit extremely unlikely. Through the years, as production has increased, the same factor has apparently continued to be used. The approval orders have never required a stack test for SO₂ as it was felt that since Nucor was limited in their raw material feed rate they were indirectly controlling emissions of SO₂. These facts, coupled with the fact that no source of SO₂ could be identified, supported a test as directed approach for the approval order. However, with this permit, Nucor will, for the first time, be required to stack test for SO₂ every five years, beginning 18 months from the original date of this permit (this will allow Nucor to plan ahead for this requirement vs. requiring an initial test which they have not planned for and which they have never been required to accomplish in the past). [Comment last updated on 9/28/2001]

11: Comment on an item originating in 40 CFR 60 Subpart AA regarding EAF Baghouse Vent (Unit 9):

Particulate limit stringency review: The NSPS for Electric Arc Furnace's, 40 CFR 60 Subpart AA, at para 60.272(a)(1) limits the emission of particulate matter from a control device (in this case a baghouse) to 0.0052 gr/dscf. Approval Order DAQE-160-00 limits the emission of particulate matter to 0.0030 gr/dscf which is more stringent than the NSPS and is the limit in this permit. [Comment last updated on 3/28/2000]

12: Comment on an item originating in 40 CFR 60 Subpart AA regarding EAF Baghouse Vent (Unit 9):

NSPS opacity limit on EAF: The NSPS for Electric Arc Furnace's, 40 CFR 60 Subpart AA, at para 60.272(a)(2) limits opacity from a control device (in this case a baghouse) to less than three percent. Approval Order DAQE-160-00 limits the opacity to no greater than three percent, which is less stringent than the NSPS. The NSPS limit is used in this permit. [Comment last updated on 7/10/2000]

13: Comment on an item originating in 40 CFR 60 Subpart AA 60.273(a) regarding EAF Baghouse Vent (Unit 9):

NSPS COM requirements: 40 CFR 60.273(a) requires a COM on the EAF baghouse unless the source is conducting opacity observations in accordance with 60.273(c). These observation requirements have been included in this permit, so no COM is required. [Comment last updated on 3/26/2000]

14: Comment on an item originating in 40 CFR 60 Subpart AA 60.273(b,c) regarding EAF Baghouse Vent (Unit 9):

EAF excess emission requirements: 40 CFR 60.273(b) and (c) define (redundantly) what constitutes excess emissions for the purposes of 60.7(c) and requires reporting of such emissions semi-annually. 60.7(c) addresses continuous monitoring device reporting. Since no COM is required for this source, these conditions do not apply. In any case, the defined excess emission level of three percent opacity or greater would be a deviation under this permit, and reportable in the deviation reports and semi-annual monitoring report required under provision I.S.1. [Comment last updated on 3/26/2000]

15: Comment on an item originating in 40 CFR 60 Subpart AA 60.273(d) regarding Electric Arc Furnaces (Unit EAF 1 & 2):

NSPS EAF static pressure monitoring requirements: Nucor has opted to perform daily visible emissions observations of the shop opacity. 40 CFR 60.273(d) relieves the source of the requirement to install a furnace static pressure monitoring device if observations of shop opacity are conducted according to certain criteria. These criteria are included in this permit, so Nucor is not required to have a furnace static monitoring device. [Comment last updated on 3/26/2000]

16: Comment on an item originating in 40 CFR 60 Subpart AA 60.274(a) regarding Electric Arc Furnaces (Unit EAF 1 & 2):

NSPS monitoring records review: The permit contains a requirement to record charge and tap information from 60.274(a)(1) and (a)(2). The flow information for 60.274(a)(3) is recorded at more frequent intervals in another EAF monitoring condition. 60.274(a)(4) addresses pressure readings from 60.274(e); however, 60.274(e) has no pressure data measurements. [Comment last updated on 3/26/2000]

17: Comment on an item originating in 40 CFR 60 Subpart AA 60.274(b,c,f,g) regarding Electric Arc Furnaces (Unit EAF 1 & 2):

NSPS EAF monitoring requirements: The approval order requires monitoring of the EAF air flow system in one of three different ways. These approval order conditions were originally based on the requirements of 40 CFR 60.274(b) and (c), and are equivalent to or more stringent than the NSPS language. Division staff has confirmed that all requirements of these NSPS conditions and the related requirements in 60.276 have been included in this permit.

Comparisons:

Fan amps and damper settings: 60.274(b)(1) requires a check and record of these values once per shift; the AO requires readings every 15 minutes. The AO is more stringent than the NSPS.

Volumetric flow in ducts: 60.274(b)(2) requires monitoring of flow through each separately ducted hood; the AO required a record of air flow in all ducts evacuating the EAF and roof canopy. Reproducibility and accuracy requirements are identical between the two conditions. The AO and NSPS are equivalent on this condition.

60.274(c) requires determination of the settings for either of the above monitoring situations whenever a compliance test is done for shop opacities. This language is included in the monitoring for the emission control system parameter monitoring condition, where both shop opacity and system parameters must be measured during any performance test to establish those parameters.

The AO also allows an option to monitor the negative pressure in the ducts used to evacuate emissions from the furnaces. These ducts are active during melting and refining, are not water-cooled and are separate from the overhead canopy ducts, though both set draw emissions to the EAF baghouse. The AO language for this option is similar to 60.274(f) and (g), with minor differences. However, 60.274(f) and (g) do not apply if the source is doing daily shop opacities as Nucor is. Therefore, this AO option is not likely to be used, and is included in the OP only to carry over the AO condition in full. [Comment last updated on 3/26/2000]

18: Comment on an item originating in DAQE-160-00 regarding Electric Arc Furnaces (Unit EAF 1 & 2):

Fan amperage and damper setting compliance values on file: Approval Order conditions 10 and 12 reflect a monitoring requirement from 40 CFR Subpart AA that requires monitoring of the pollution control equipment on an EAF based on the results from the initial compliance inspection. Nucor has completed such performance tests and DAQ has those results. A copy of the results will be stored with this permit for reference as opposed to reproducing the results in the permit. The requirement to monitor the pollution control system (fan amps, etc) is included in this permit with the appropriate language referencing the results of the performance tests. [Comment last updated on 3/28/2000]

19: Comment on an item originating in 1997 Notice of Intent regarding EAF Dust Handling Fugitive Sources (Unit 11):

Dust handling sources not covered in EAF Dust Handling Fugitive Sources: EAF dust handling from canopy/DEC dropout chamber operations occur inside the meltshop and are controlled by the canopy system. The emission points listed in the emission unit description in this permit are outside of the meltshop. Additionally, the spark arrestor directly upstream from the baghouse has been determined to be inherent process equipment, not a control device. [Comment last updated on 3/27/2000]

20: Comment on an item originating in DAQE-160-00 regarding permitted source (Source-wide):

Changes in this approval order: This approval order was written to allow replacement of burners in the EAFs, and added only a construction term. No limits or workpractices were changed, and no changes were made in the draft operating permit. [Comment last updated on 9/28/2001]

21: Comment on an item originating in EPA comment during 2nd comment period regarding permitted source (Source-wide):

EPA comments and responses: EPA submitted comments on 5/15/00 regarding the CO test schedule, lack of VOC limit, and adequacy of periodic monitoring for SO₂. Nucor responded to the EPA comments on 5/30/00.

An initial stack test for SO₂ has been added to the permit, with subsequent tests on a 5-year schedule in accordance with rule. If there is a problem with the results of the initial test, it is expected that Nucor will contact DAQ with suggested resolutions. Also, the overlooked VOC limit has been added in, with a five-year test schedule. The CO testing is unchanged, since the source is comfortable with the approach. A very recent stack test shows that the source is currently operating at less than 20% of its 1-hr limit. [Comment last updated on 10/15/2001]

22: Comment on an item originating in R307-203-1 regarding permitted source (Source-wide):

Sulfur Content of Fuel Monitoring: Minor wording change: The monitoring condition for sulfur content of fuel in the final permit was changed from the text in the public comment version. The earlier version implied that the alternative monitoring by showing the type of fuel purchased was restricted to #2 diesel. The current language, which is used in a recently-issued permit, correctly shows #2 or lighter. [Comment last updated on 9/18/2000]

23: Comment on an item originating in DAQE-787-01 regarding permitted source (Source-wide):

Changes in this approval order: This AO and the underlying NOI required several small changes to the Title V permit:

- 1) Sandblasting was added to the permit in Section II.A and II.B;
 - 2) The reheat furnace duties listed in the original Title V permit were incorrect (reversed). The duties are now correct;
 - 3) Scrap weight monitoring was reworded;
 - 4) Fan amp monitoring frequency was reduced from 15 min to once per shift;
 - 5) VOC limit on EAF and test method changed;
 - 6) Glycol storage tank added in Section II.A and subject to recordkeeping under Subpart Kb;
 - 7) Source-wide use of propane recognized in natural gas equipment;
 - 8) VOC limit applied to solvent cleaning and painting activities, and these activities were separated from miscellaneous emissions in Section II.A. Except for the VOC limits above, emission limits were unchanged in this approval order, which replaces DAQE-160-01 as a basis for this permit.
- [Comment last updated on 10/15/2001]

24: Comment on an item originating in DAQE-787-01 regarding permitted source (Source-wide):

Subpart AAA inclusion: Some changes covered in the April 2001 and AO could trigger applicability of 60 Subpart AAA. NSR chose to include this in the AO. Since Nucor is not making any such changes now, Subpart AAA is not referenced in this permit. If changes are made that trigger new applicable requirements, the permit will be reopened at that time in accordance with rule. [Comment last updated on 9/21/2001]

25: Comment on an item originating in this permit regarding permitted source (Source-wide):

Monitoring stringency for propane and natural gas limits potentially changed.: The monitoring for natural gas and propane consumption originally required the subtraction of the fuel used by the EAF oxyfuel burners. Nucor requested that the subtraction be optional. DAQ agreed because the end result is potentially more stringent. Now Nucor MAY subtract the oxyfuel burners. [Comment last updated on 9/28/2001]